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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,200	11/14/2003	Stefan Ihde	67185-004	2663

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HUSCH & EPPENBERGER, LLC
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EXAMINER

WERNER, JONATHAN S

ART UNIT	PAPER NUMBER
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3732

DATE MAILED: 11/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/714,200

Applicant(s)

IHDE, STEFAN

Examiner

Jonathan Werner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/14/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 11/14/03 was filed before the mailing date of a first Office Action on the merits. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. As to claim 1, it is unclear whether the claimed "structure that is periodic" is part of said top and bottom surfaces or simply another part of said base and said bar. Furthermore, claims 2 and 7 recite the limitations "period" and "structure" in describing the bone adaptive surface. There is insufficient antecedent basis for this limitation in the claim. As to claim 21, it is unclear from the claim language what applicant is trying to claim regarding the limitation that "marginal zones are formed a depression..."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 7-10, and 13-17 are rejected, as understood, under 35 U.S.C. 102(b) as being anticipated by Kurpis (4,768,956). As to claim 1, Kurpis shows a prosthetic device for implanting in bone comprising a thread carrier (18, column 5, line 36-39); a base (bottom of Figure 2); at least one bar fixing said base to said thread carrier (12); said base and said bar having a top surface and a bottom surface (Figure 2), wherein said top and bottom surfaces are bone adaptive (col 3, ln 11-13) and have a structure that is periodic (14). As to claim 7, Kurpis shows in Figure 4 that the period varies. As to claims 8 and 9, Figure 5 shows the periodic bone adaptive surface is a spiral, wherein said spiral centers on said thread carrier (118). As to claim 10, Figure 1 shows surface structures (14) that are parallel. As to claim 13, Kurpis shows in Figures 1 and 5 a base that is curvilinear in shape. As to claim 14, Figure 1 shows the base is substantially rectangular. As to claim 15, Figure 1 shows the base is curvilinear in part and substantially rectangular in part. In claim 16, the bone adaptive surface structure includes ridges (28) that are curvilinear and concave to a direction of prosthetic device insertion and substantially vertical on a face facing away from said direction of insertion. As to claim 17, the height of said base and said bar varies radially (Figure 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurpis in view of Boyle (6,277,149). As to claim 2, Kurpis discloses a prosthetic device for implanting in bone as previously described above, but fails to show that only one of said top or said bottom surfaces has a periodic bone adaptive surface structure. Boyle, however, teaches a prosthetic device in which only one of said top or bottom surfaces has a periodic bone adaptive surface structure (Figure 8). Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to make only one side have a periodic bone adaptive surface in order to ensure that osseointegration occurs within the most effective region as taught by Boyle. As to claim 3, Kurpis fails to show that only said base has said periodic bone adaptive surface structure. Boyle, however, teaches a prosthetic device in which only one surface has a periodic bone adaptive surface structure (col 5, ln 45-48). Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to make only the base have a periodic bone adaptive surface in order to ensure that osseointegration occurs at the bottom of the device to serve as an anchor for the prosthetic as taught by Boyle. As to claims 4 and 5, Kurpis fails to show that the periodic bone adaptive surface is corrugated or has ridges with sharp edges oriented outwards from said top or bottom surface. Boyle, however, teaches a prosthetic device which has a periodic bone adaptive surface that is corrugated and has ridges

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with sharp edges oriented outwards (28). Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to make the periodic bone adaptive surface corrugated or make it with ridges in order to facilitate proper osseointegration and to keep the device stationary so it does not slip out of position as taught by Boyle.

6. Claims 4, 6, and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurpis in view of Grafelmann (4,538,304). As to claims 4 and 6, Kurpis discloses a prosthetic device for implanting in bone as previously described above, but fails to show that the periodic bone adaptive surface structure is corrugated or has rounded troughs that are concave.

Grafelmann, however, teaches a prosthetic device for implanting in bone which has a periodic bone adaptive surface that is corrugated (col 2, ln 52) and that has rounded troughs that are concave (4). Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to make the periodic bone adaptive surface corrugated or with concave troughs so that the osseointegration process involves bone that grows into the grooves of the corrugated region and the troughs as taught by Grafelmann. As to claim 18, Kurpis fails to show that the periodic bone adaptive surface structure has a base with a first height and a second shorter height at a marginal zone that is along a portion of a periphery of said base. Grafelmann, however, teaches a prosthetic device for implanting in bone which has a base with a first height (top of Figures 2,4) and a second shorter height at a marginal zone that is along a portion of a periphery of said base (bottom of Figures 2,4). Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to make the periodic bone adaptive surface have a base with a first height and a second shorter height in order to promote

the application of pressure by the body plate to the surrounding body tissue as taught by Grafelmann. As to claim 19, a radial depth of the marginal zone varies along the periphery of the base (Figure 4). As to claim 20, Figure 4 shows the marginal zones comprise reentrant angles. As to claim 21, Figure 4 shows a depression formed in the marginal zones that is relative to either the top or bottom surface of the base and is flush with the other surface. As to claim 22, Figure 4 shows some of the marginal zones form depressions in one of the top or bottom surface and other marginal zones form depressions in the other surface.

7. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurpis in view of Baege (5,965,006). As to claim 11, Kurpis discloses a prosthetic device for implanting in bone as previously described above, but fails to show that the periodic bone adaptive surface structure is a matrix of bowl-like depressions. Baege, however, teaches a prosthetic device for implanting in bone which has a periodic bone adaptive surface that is a matrix of bowl-like depressions (Figure 1a). Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to make the periodic bone adaptive surface a matrix of bowl-like depressions in order to provide a sufficient anchoring depth for ingrowing bone matter during osseointegration as taught by Baege. As to claim 12, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make said depression have a depth in a range from about 0.05 mm to about 0.25 mm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

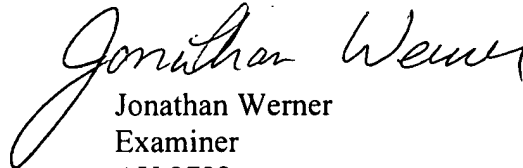
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please refer to included form PTO-892 for all additional pertinent prior art related to prosthetic devices for implanting in bones.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Werner whose telephone number is (571) 272-2767. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jonathan Werner
Examiner
AU 3732

JSW
11/19/05


MELBA N. BUMGARNER
PRIMARY EXAMINER